

Title (en)
LOUDSPEAKER MODULE AND PORTABLE ELECTRONIC DEVICE

Title (de)
LAUTSPRECHERMODUL UND TRAGBARE ELEKTRONISCHE VORRICHTUNG

Title (fr)
MODULE DE HAUT-PARLEUR ET DISPOSITIF ÉLECTRONIQUE PORTABLE

Publication
EP 4044621 A4 20221214 (EN)

Application
EP 20891400 A 20201111

Priority
• CN 201911159240 A 20191122
• CN 2020128013 W 20201111

Abstract (en)
[origin: EP4044621A1] Embodiments of this application provide a speaker module and a portable electronic device. The speaker module includes a first speaker module and a second speaker module. The first speaker module includes a first housing and a first speaker monomer accommodated in the first housing, and the first speaker monomer has a first diaphragm. The second speaker module includes a second housing and a second speaker monomer accommodated in the second housing, and the second speaker monomer has a second diaphragm. The first speaker module and the second speaker module are sequentially disposed in a vertical direction, and a vibration direction of the first diaphragm is opposite to a vibration direction of the second diaphragm, so that momentum variations (mv) Δ of the speaker module are offset against each other, thereby resolving a problem that a vibration feeling is strong when the speaker module works.

IPC 8 full level
H04R 9/06 (2006.01); **H04R 1/02** (2006.01); **H04R 1/22** (2006.01); **H04R 1/28** (2006.01)

CPC (source: CN EP US)
H04R 1/02 (2013.01 - CN EP); **H04R 1/025** (2013.01 - US); **H04R 1/028** (2013.01 - US); **H04R 1/227** (2013.01 - EP US); **H04R 1/2873** (2013.01 - EP); **H04R 3/00** (2013.01 - US); **H04R 7/02** (2013.01 - CN); **H04R 7/12** (2013.01 - US); **H04R 1/025** (2013.01 - EP); **H04R 1/2826** (2013.01 - EP); **H04R 1/2857** (2013.01 - EP); **H04R 9/025** (2013.01 - US); **H04R 9/06** (2013.01 - US); **H04R 2209/026** (2013.01 - EP); **H04R 2499/11** (2013.01 - EP US); **H04R 2499/15** (2013.01 - US)

Citation (search report)
• [X] US 2009208026 A1 20090820 - NICHOLS GEORGE [US], et al
• [X] JP H11205886 A 19990730 - SONY CORP
• [X] US 4064966 A 19771227 - BURTON WILLIAM D
• [X] JP H11178083 A 19990702 - SONY CORP
• [X] US 2003003945 A1 20030102 - SAIKI SHUJI [JP], et al
• See also references of WO 2021098563A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4044621 A1 20220817; **EP 4044621 A4 20221214**; CN 112839270 A 20210525; US 2022417648 A1 20221229;
WO 2021098563 A1 20210527

DOCDB simple family (application)
EP 20891400 A 20201111; CN 201911159240 A 20191122; CN 2020128013 W 20201111; US 202017778556 A 20201111